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U.S. DEPARTMENT OF AGRICULTURE

Ellis Integrated Vegetation Project

Heppner and North Fork John Day Ranger Districts
Umatilla National Forest

July 2021 (updated September 2021)

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Ellis Project Overview

Background

In 2018 the Heppner and North Fork John Day Ranger Districts initiated the proposed Ellis Integrated Vegetation Project (Ellis Project) to restore the project area to a healthy ecosystem and resilient landscape.

The project is located on the Umatilla National Forest between Ukiah and Heppner, OR and is within Morrow, Umatilla, and Grant Counties.

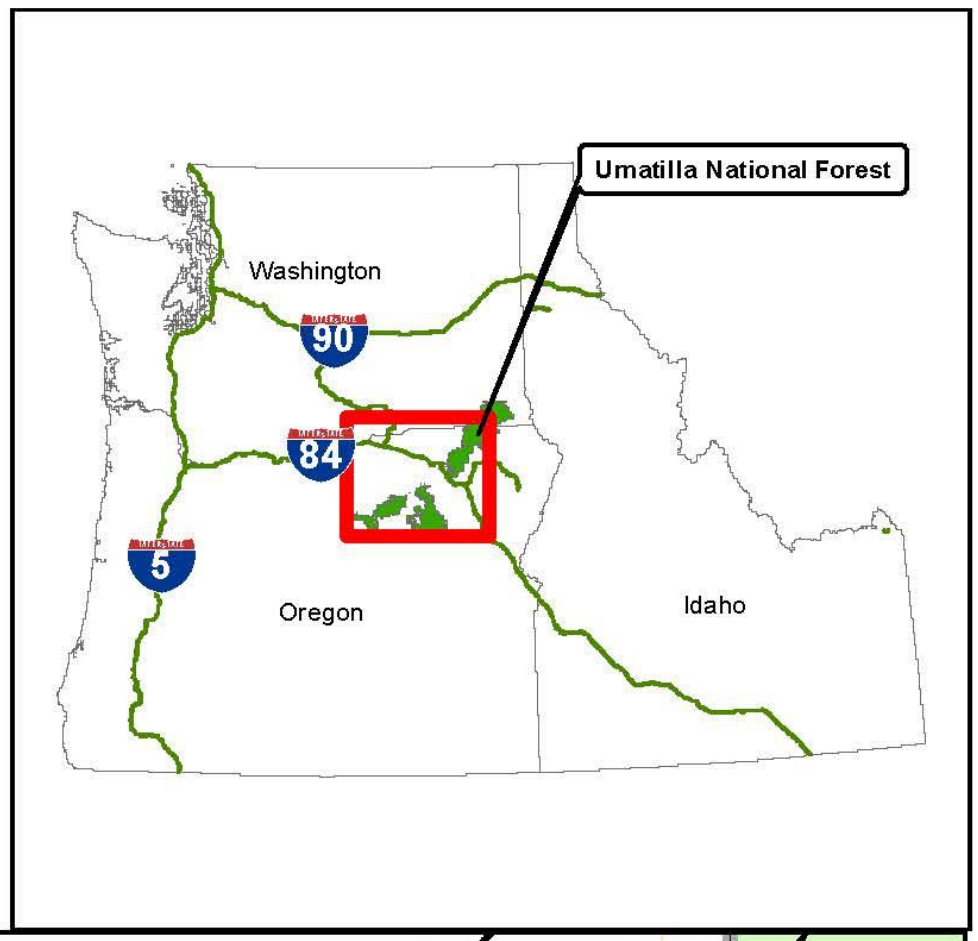
The project area is about 114,600 acres which includes approximately 4,600 acres of private land. Approximately 105,000 acres may be considered for treatment on National Forest System lands. No treatments are proposed on private lands but the Forest Service is working collaboratively with partners and neighbors to improve resiliency across boundaries and meet objectives of this project.

What is the purpose of this project?

- Increase forest health and vigor
- Enhance unique plant communities
- Improve wildlife habitat
- Protect values at risk, public and firefighter safety
- Enhance public and traditional land uses through vegetation management and habitat improvement

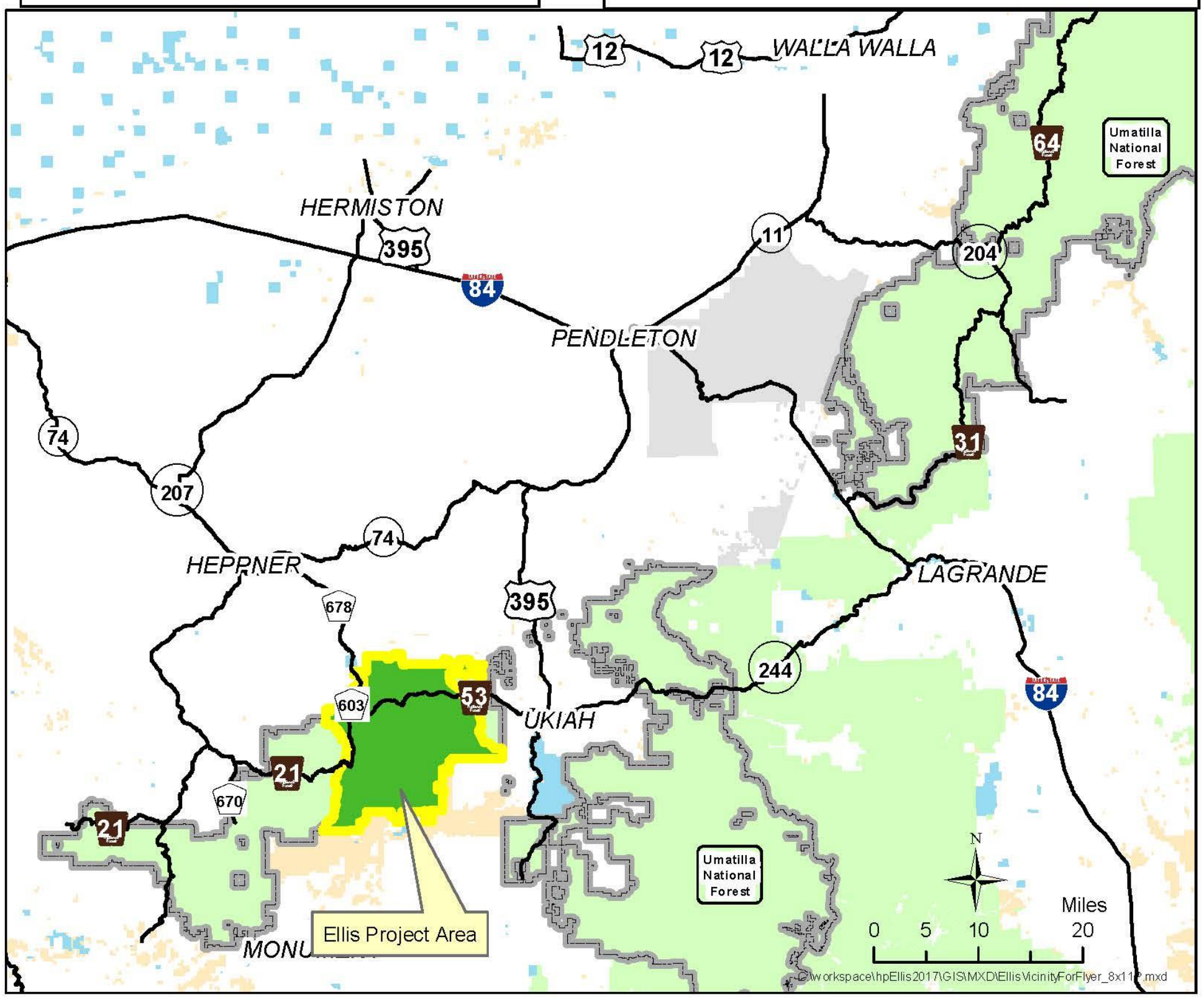
Ellis Intergrated Vegetation Project

Vicinity Map
Heppner Ranger District
North Fork John Day Ranger District
Umatilla National Forest
Date: 10/16/2018



Legend

- Major Road
- Project Area
- Umatilla Forest
- Bureau of Indian Affairs
- Bureau of Land Management
- State Agency
- U.S. Forest Service



Forest Health

Purpose: Increase forest health and vigor

Need for Change:

- Forest is vulnerable to disturbances: uncharacteristic wildfire, insects, and disease
- Density, composition, and structure is not within natural range of variability

Desired future conditions would be within the range of variation for forest stand density and structure, described as a percent of each upland forest type within the project area.

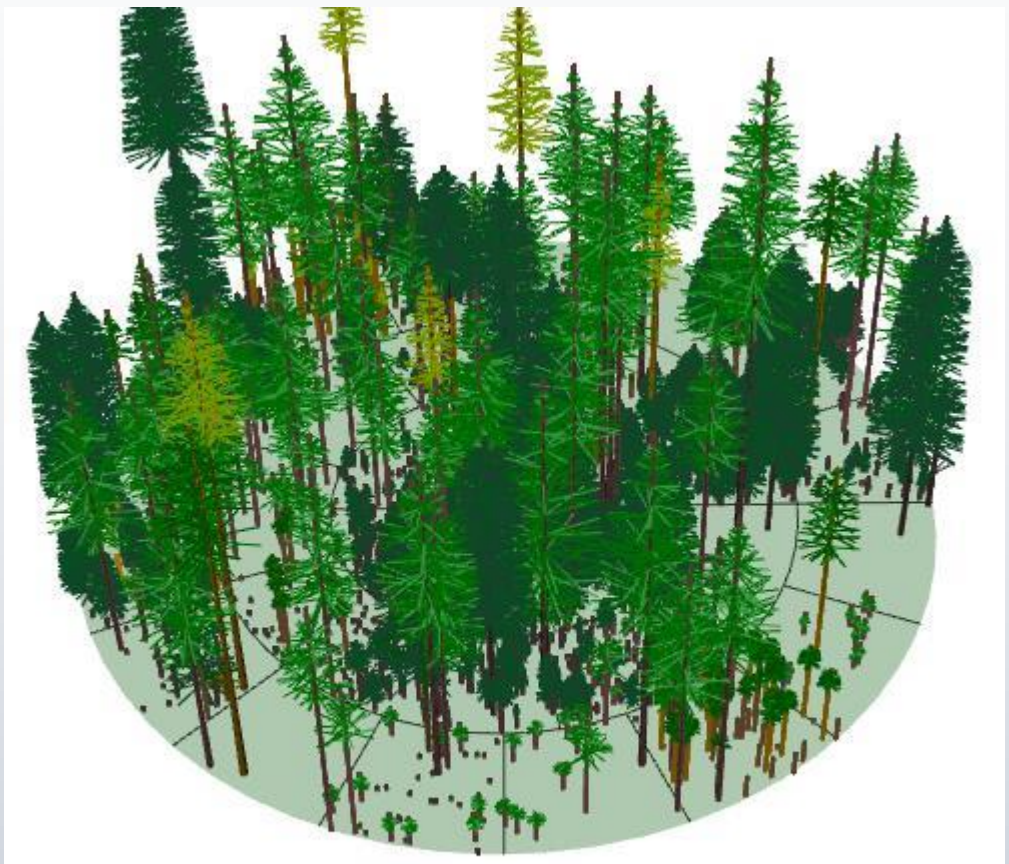
Stand Density	Range of variation (%)			Existing Conditions (%)		
Forest type	Low	Moderate	High	Low	Moderate	High
Dry upland forest	40-85	15-30	5-15	15	4	81
Moist upland forest	20-40	25-60	15-30	9	10	82
Cold upland forest	15-35	20-40	25-60	7	6	87

Structure	Range of variation (%)					Existing Conditions (%)				
Forest type	SI	SE	UR	OFSS	OFMS	SI	SE	UR	OFSS	OFMS
Dry upland forest	15-30	10-20	0-5	40-65	1-15	5	13	53	3	26
Moist upland forest	20-30	20-30	15-25	10-20	15-20	12	12	55	1	20
Cold upland forest	20-45	15-30	10-25	5-20	10-25	15	35	32	1	17

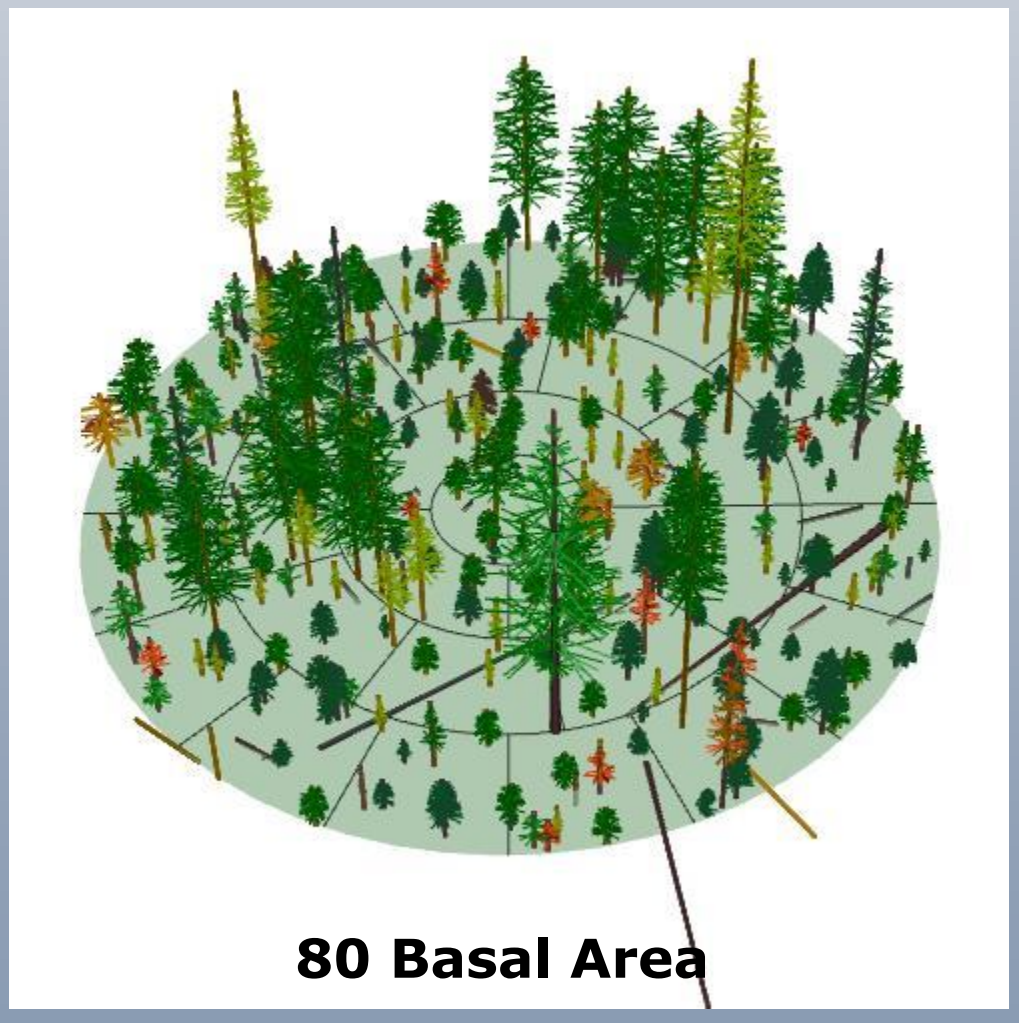
SI = Stand Initiation
SE = Stem Exclusion
UR = Understory Reinitiation

OFSS = Old Forest Single Story
OFMS = Old Forest Multi-story

Forest Health: Stand Density



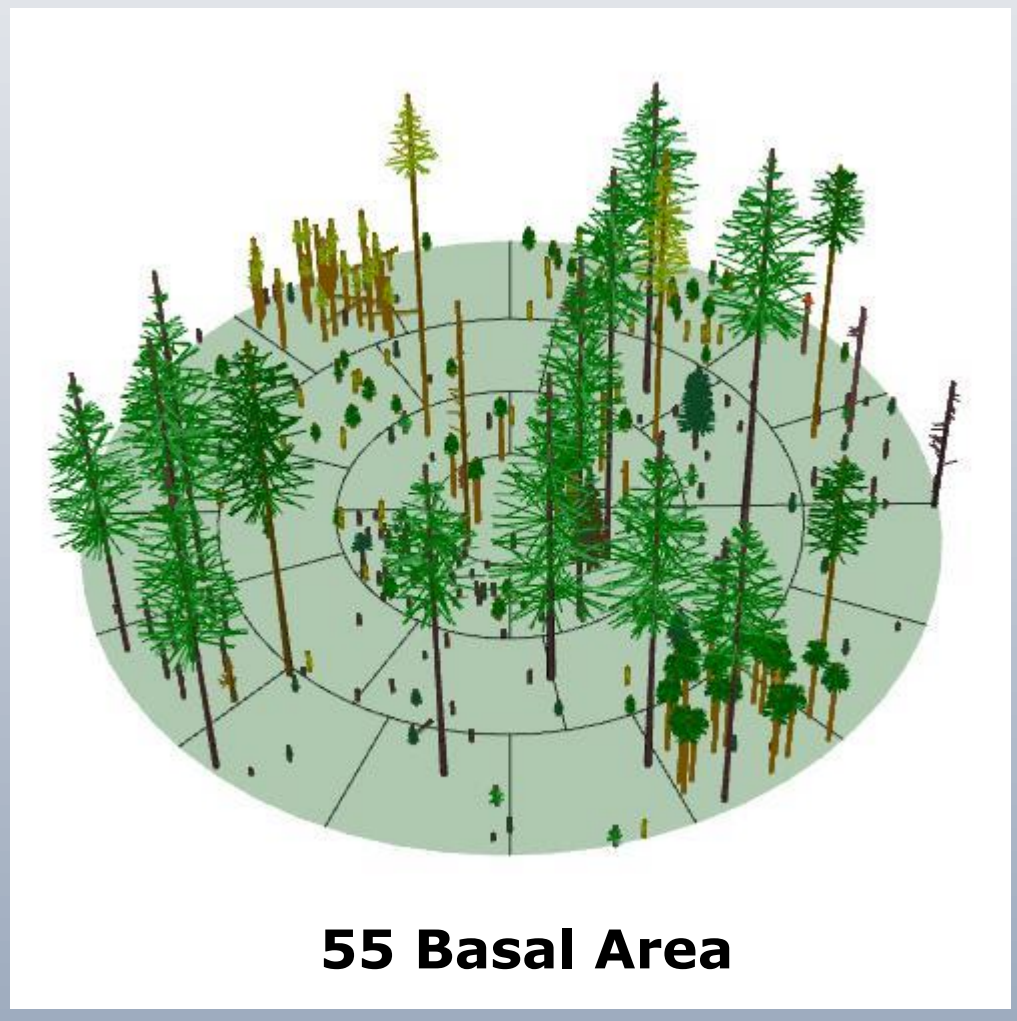
160 Basal Area



80 Basal Area

What is Basal Area (BA)?

- Basal Area is a common way to describe stand density represented in square feet per acre. It is dependent on the number of trees and their relative size.



55 Basal Area

- Target BA range for treated areas: 30-80 in dry forest; 20-100 in moist forest; and 10-90 in cold forest
- Note: lower end of the range in moist and cold will only be implemented to address site specific forest health issues

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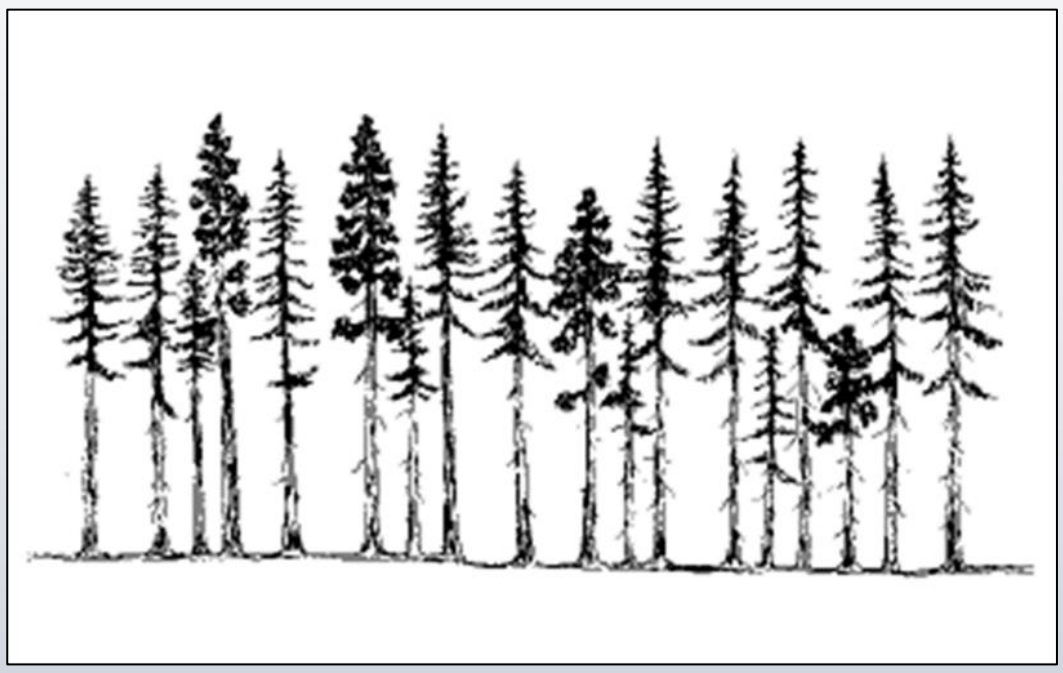
Forest Health: Structural Stages

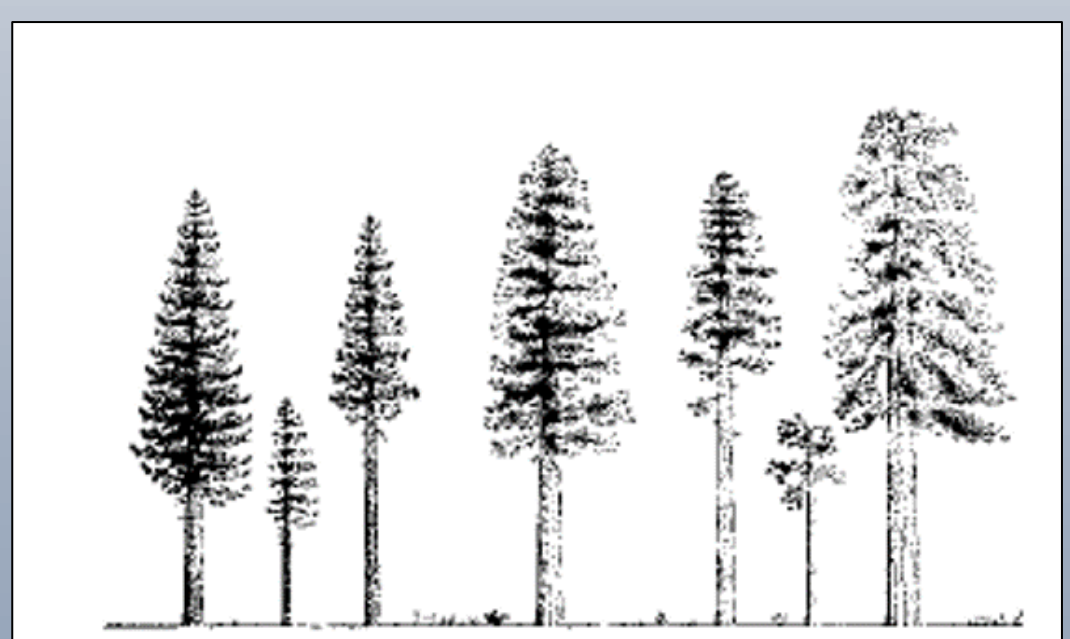
Stand Initiation (SI)

Stem Exclusion (SE)



Understory Reinitiation (UR)

Old Forest (OFMS and OFSS)



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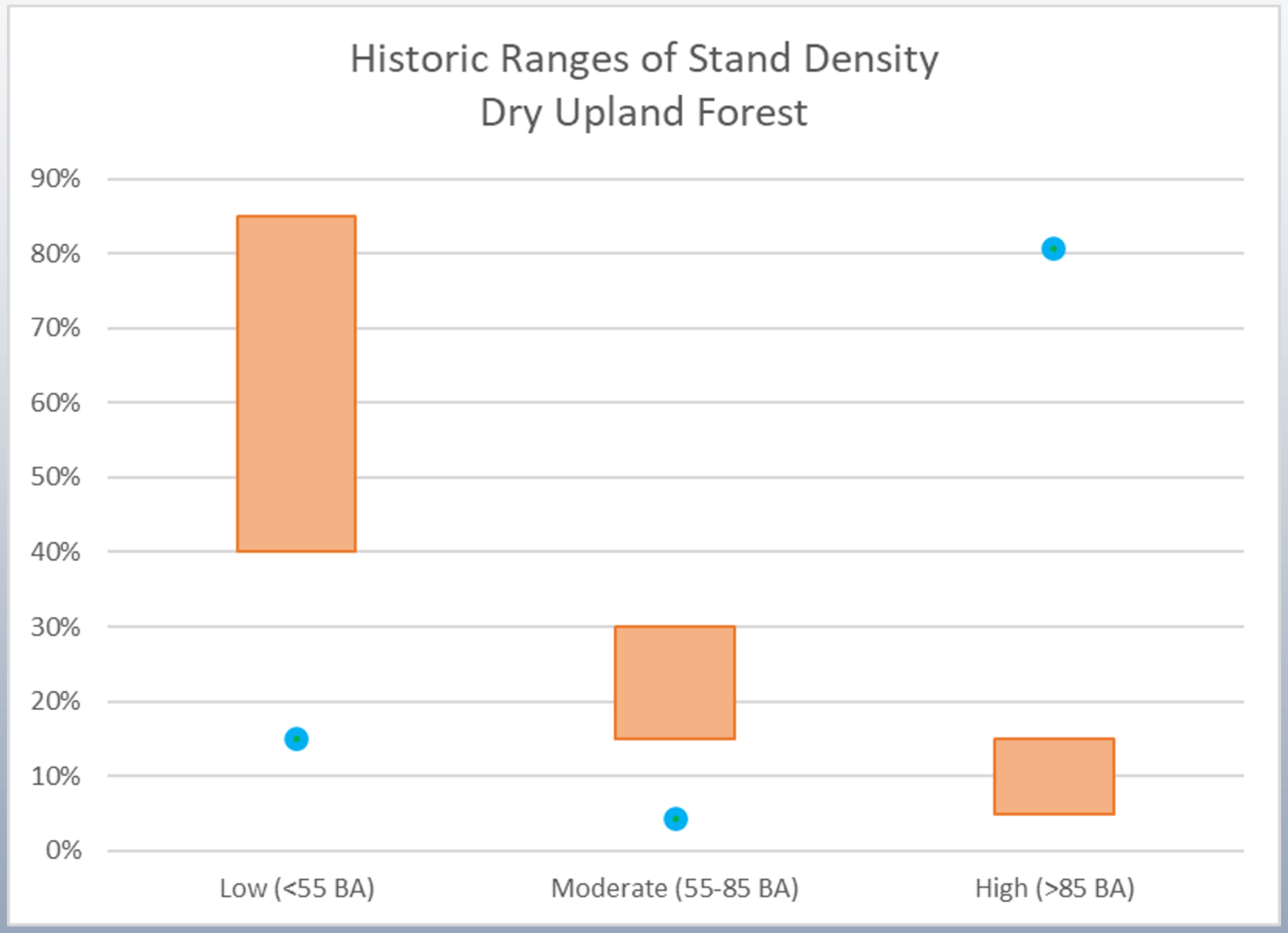
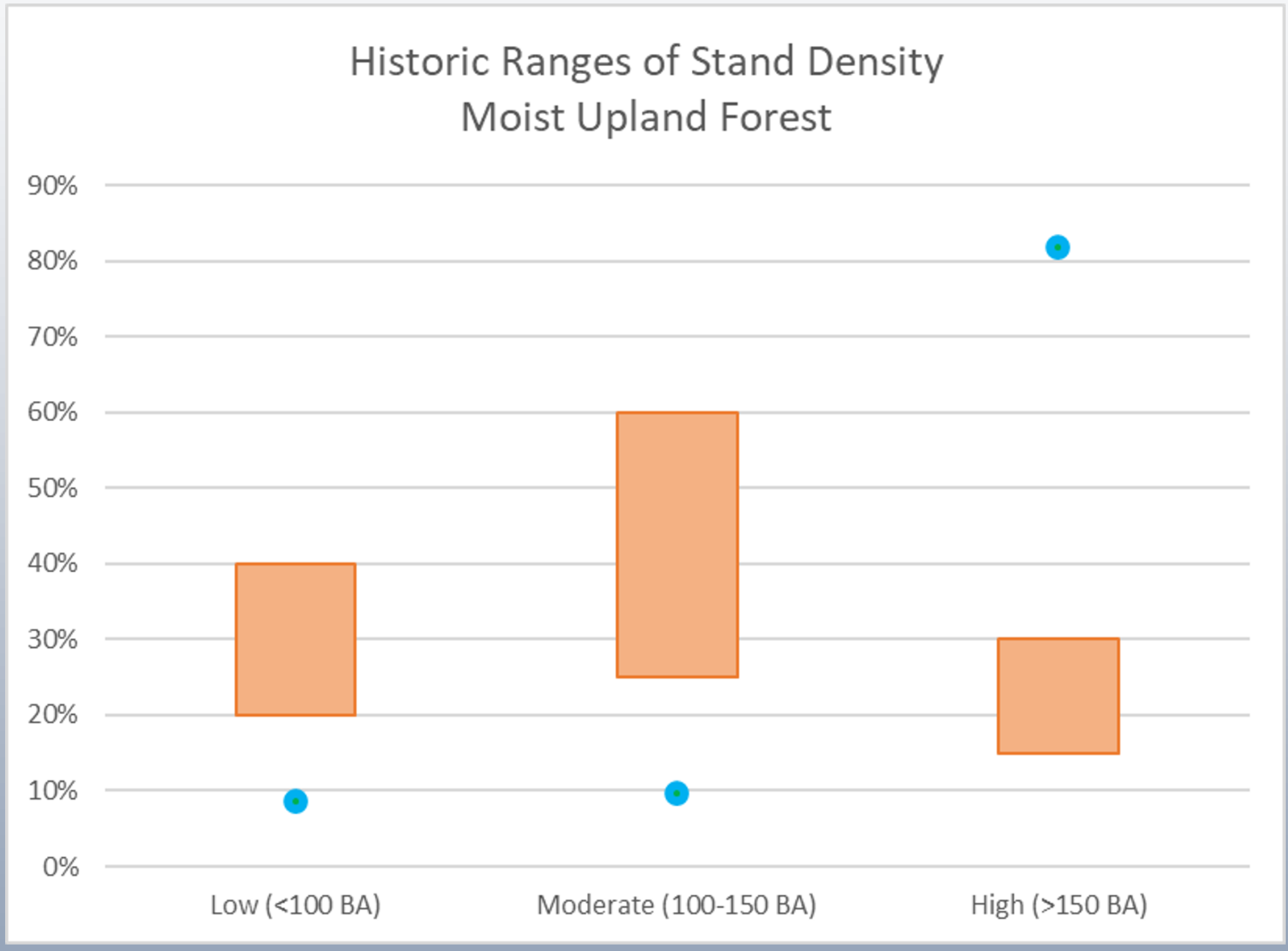
Forest Health: Stand Density
Dry Forests



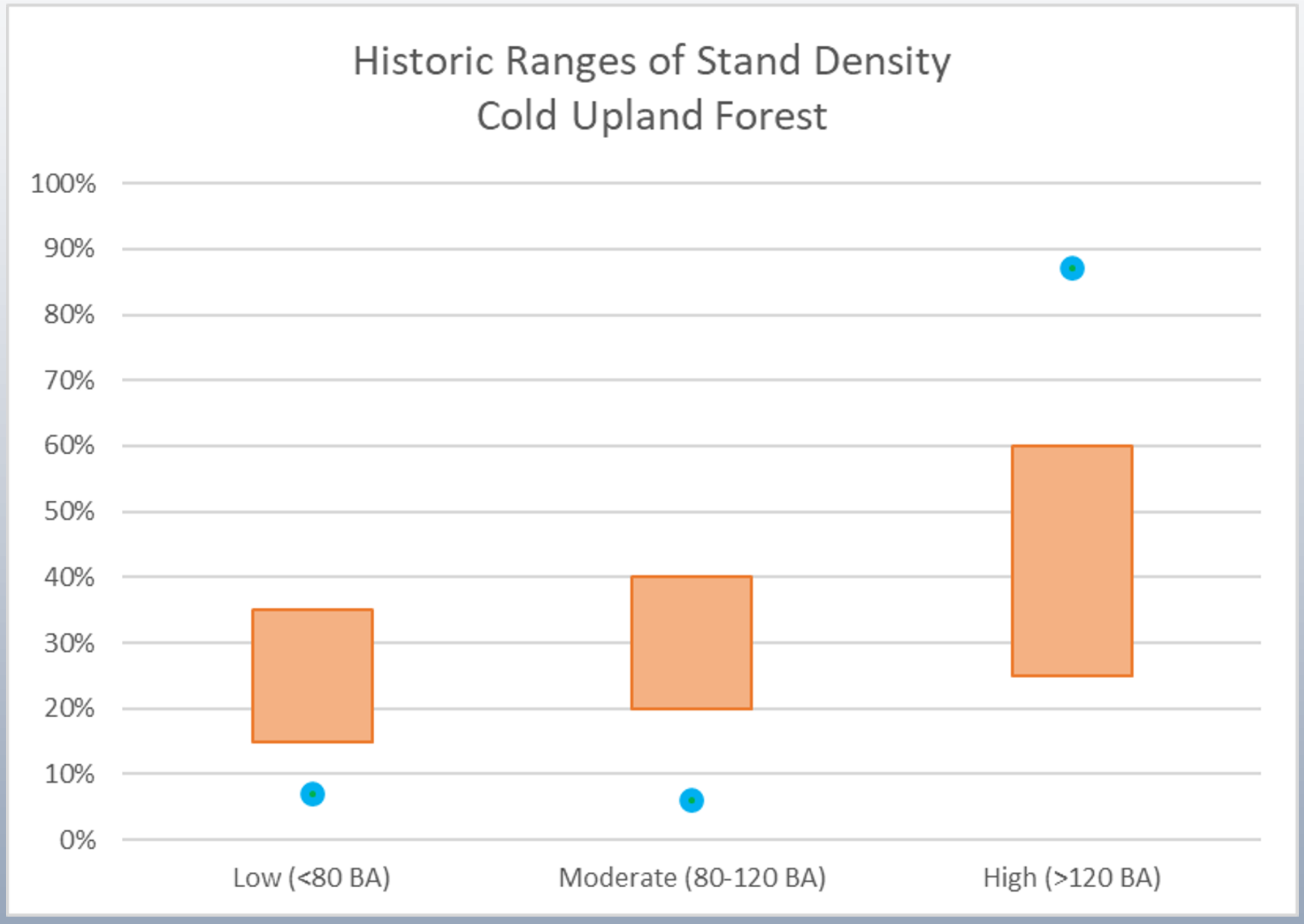
Orange bar = Historic Range of Variation (HRV)
Blue dot = Existing Condition
BA = Basal Area (a common way to describe stand density)
Y axis is percent of each forest type within the Ellis Project area

Forest Health: Stand Density
Moist Forests



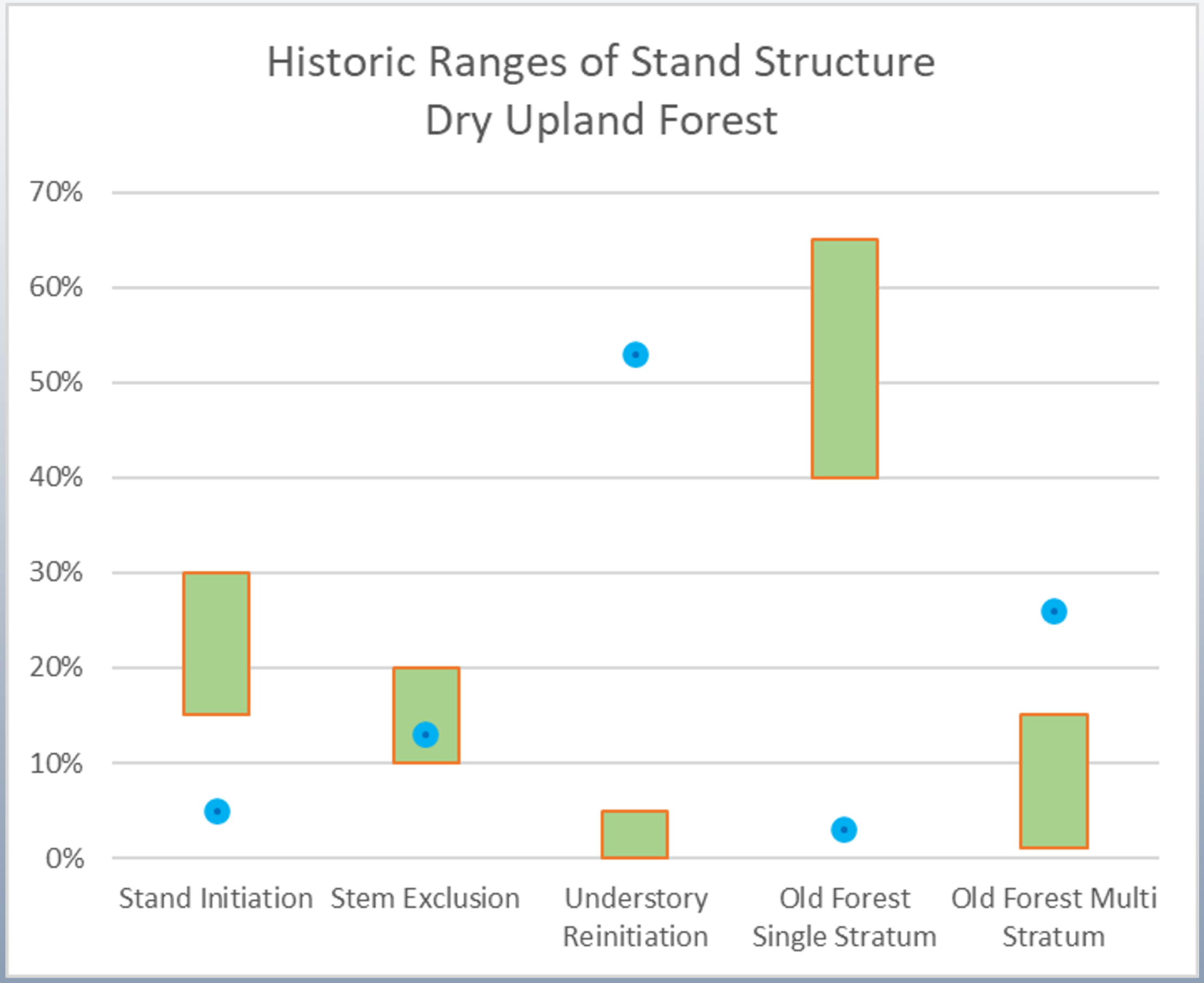
Orange bar = Historic Range of Variation (HRV)
Blue dot = Existing Condition
BA = Basal Area (a common way to describe stand density)
Y axis is percent of each forest type within the Ellis Project area

Forest Health: Stand Density
Cold Forests



Orange bar = Historic Range of Variation (HRV)
Blue dot = Existing Condition
BA = Basal Area (a common way to describe stand density)
Y axis is percent of each forest type within the Ellis Project area

Forest Health: Stand Structure
Dry Forests



Green bar = Historic Range of Variation (HRV)
Blue dot = Existing Conditions
Y axis is percent of each forest type within the Ellis Project area

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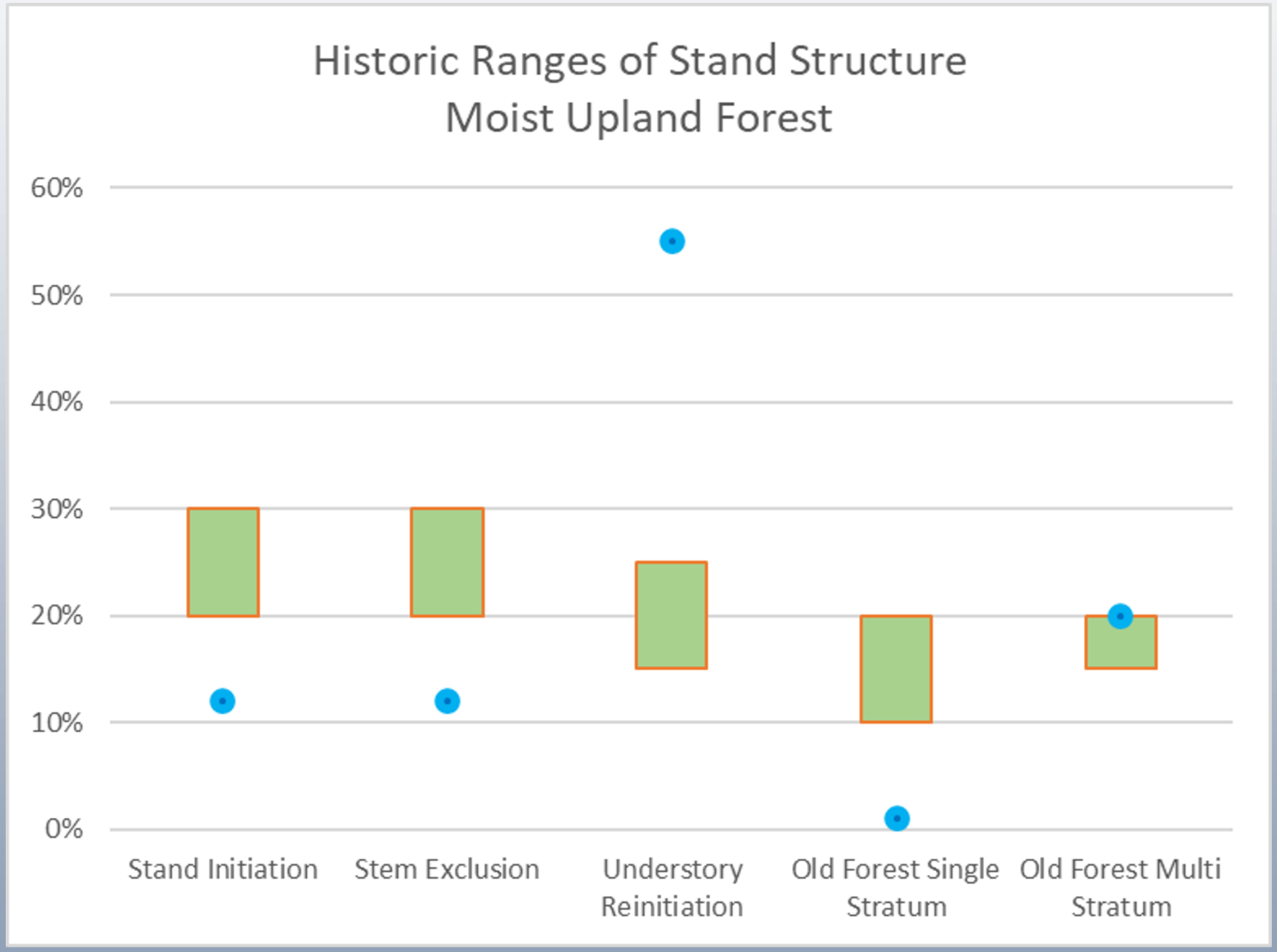
Forest Health: Stand Structure
Moist Forests



Green bar = Historic Range of Variation (HRV)
Blue dot = Existing Conditions
Y axis is percent of each forest type within the Ellis Project area

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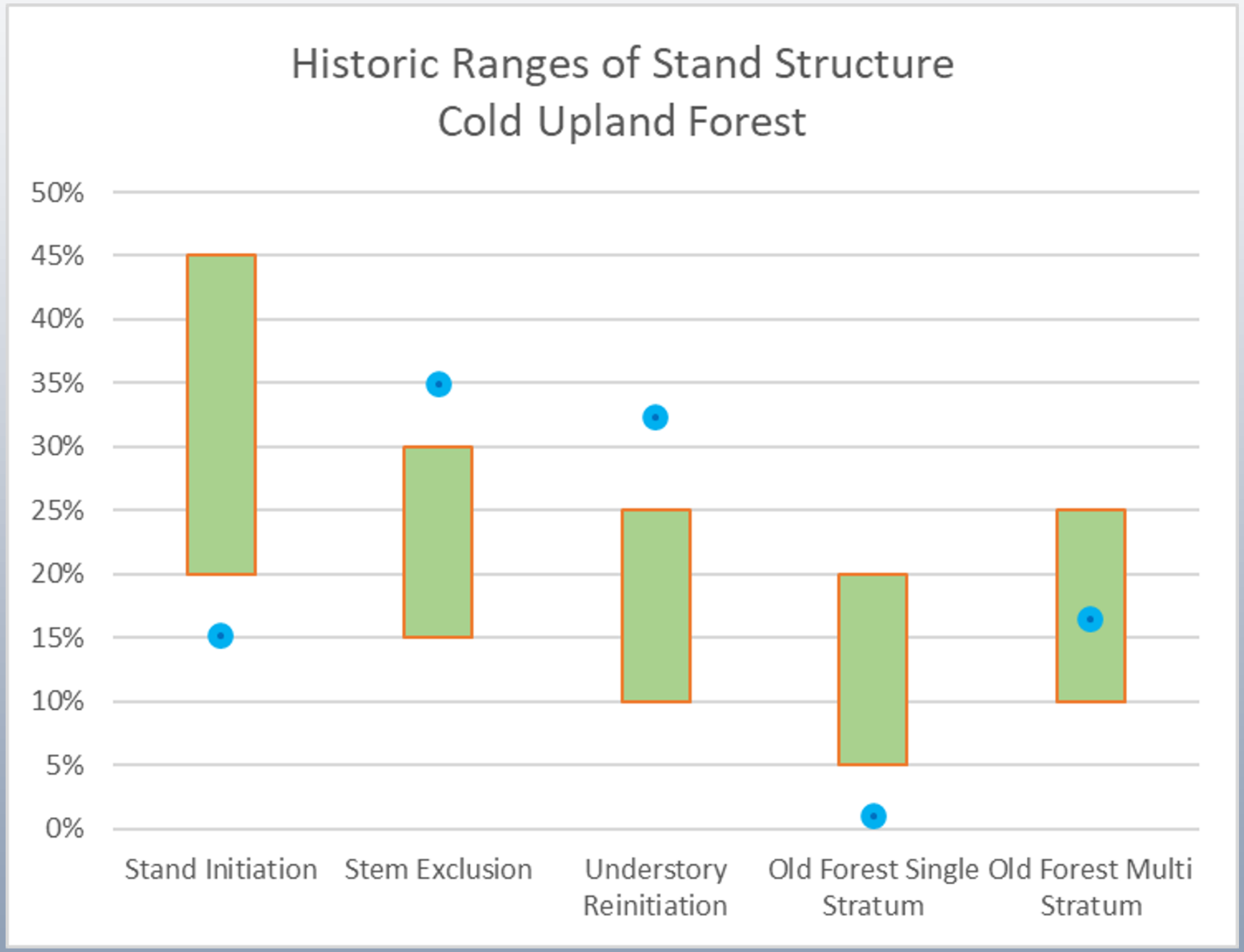
Forest Health: Stand Structure
Cold Forests



Green bar = Historic Range of Variation (HRV)
Blue dot = Existing Conditions
Y axis is percent of each forest type within the Ellis Project area

Unique Plant Communities

Purpose: Enhance aspen stands, shrub-steppe, meadows, and other non-forested plant communities (This is connected to forest health and will largely be achieved through thinning and prescribed fire, with additional site-specific treatments.)

Need for Change:

- Trees are encroaching within and adjacent to non-forested plant communities
- Conifers are competing with and reducing vigor of aspen
- Hydrologic function of wet meadows is not intact
- Non-native invasive plants are out competing native plants
- Pollinator plants and meadow openings are in decline due to forest succession and competition from non-native invasive plants

Wildlife Habitats

Existing Conditions:

- There are currently 301 miles of open roads and 37 miles of seasonal roads within the project area.
- 11% of the project area is considered "elk security" (> ½ mile from an open motorized route, >250 ac). Improving elk security by strategically closing some roads (yearlong or seasonal) and improving forage through forest health treatments (thinning and prescribed fire) will enhance big game habitat and will help improve distribution of elk.

Purpose:

- Improve wildlife habitat
- Improve distribution of elk

Need for Change: (Vegetative Conditions)

- Wildlife habitat is not well distributed and has limited vegetative diversity
- Elk forage quality is generally poor
- More elk are on private lands instead of using spring, summer, and fall ranges on the Forest
- Dry forests are overstocked, and fire return intervals are interrupted

Need for Change – why manage the road network?

- Coupling vegetation management with road management will help improve habitat for elk and other wildlife
- Help improve distribution of elk and encourage them to stay on public lands which can increase opportunities for tribal and public hunters and reduce damage to agriculture on adjacent private lands
- Improve fish habitat and water quality
- Provide for multiple use opportunities in a safe and sustainable way while balancing the needs of wildlife
- Reduce road maintenance costs
- Reduce the number of redundant roads that lead to the same destination

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Protect Values at Risk, Public and Firefighter Safety

Purpose:

Reduce the risk of undesirable wildfire and improve ingress and egress corridors by reducing fuels along roadways

Need for Change:

- Forest is vulnerable to uncharacteristic, high severity wildfires
- Property, infrastructure, and other values are at risk
- Vegetative conditions do not allow for efficient and effective response to wildfire or to use natural wildfire as a management tool
- Firefighter and public safety is at risk
- Fuel breaks and ingress and egress routes are nonexistent or ineffective

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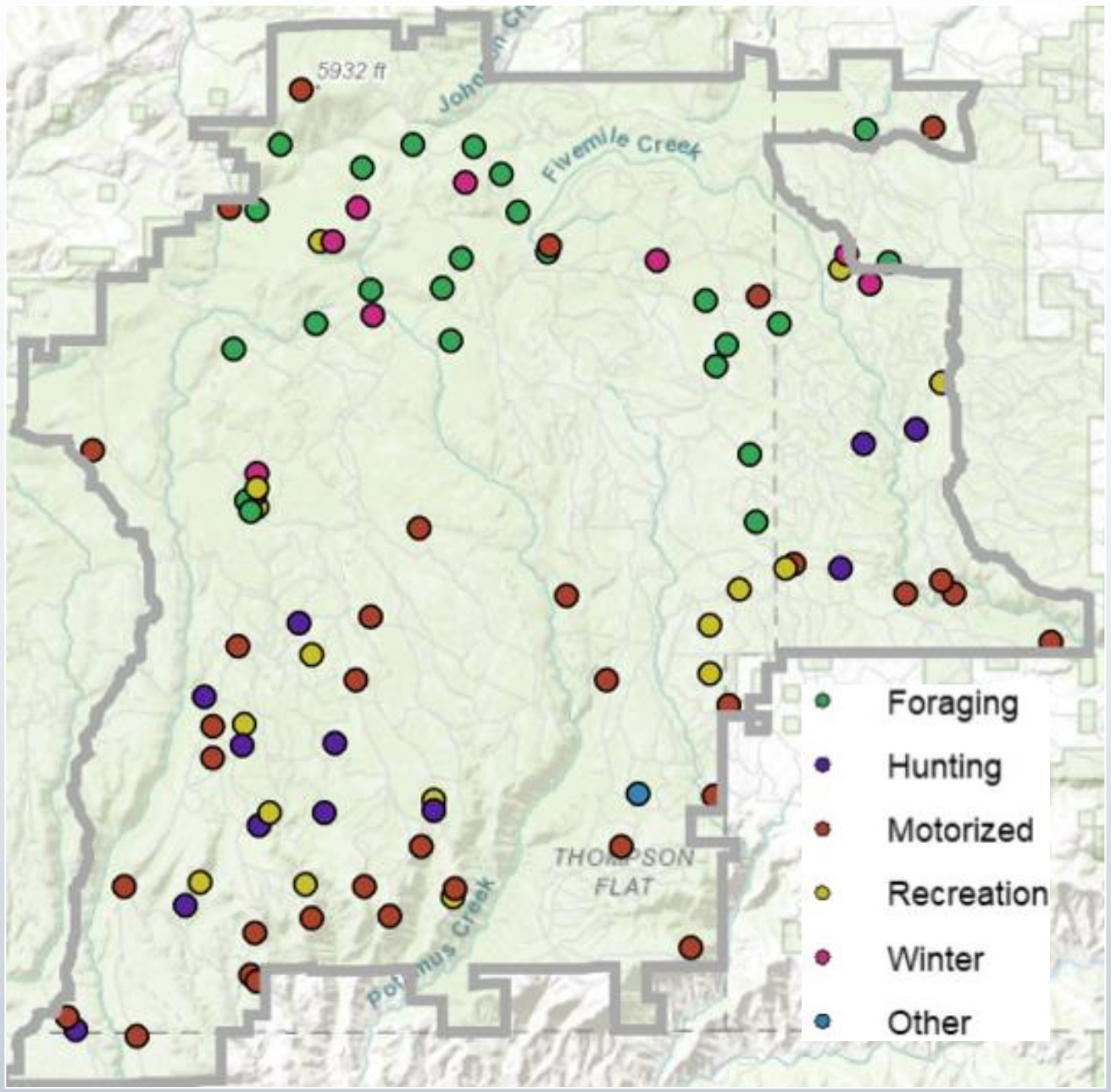
The Forest User Experience

We recognize the importance of the Ellis Project area to many different National Forest Land users and have identified the need to:

Enhance and monitor culturally significant resources

Improve and maintain recreational values

Provide forest products and support local communities



Values Mapping and Field Trips

- The Forest hosted 3 public workshops to provide context and information about the Ellis Project, rationale and science behind proposed actions, and give the public an opportunity to express how they value the planning area.
- Participants of the workshops were asked to identify on maps areas that were important for their forest user experience, represented by the map above.
- The Forest also hosted 2 field trips and plans to continue engagement with various stakeholders, partners, tribes, and the public to keep people informed and hear their thoughts.
- The Forest is coordinating with the tribes to have a better understanding of how treatments effect culturally significant plant species.

Desired Outcomes

The Ellis Integrated Vegetation Project is intended to reduce tree density in overstocked stands and improve ecosystem health. The desired outcome of the proposed activities is to enhance landscape resiliency by creating and maintaining diverse vegetative conditions at both stand and landscape scales.

The proposed actions will achieve the following goals: reduce the risk of uncharacteristic disturbances; enhance unique vegetative communities; provide well-distributed, high quality wildlife habitat for associated species; aid in protecting values at risk; promote the health and safety of public and firefighters; and contribute to social, cultural, and economic needs.

Increase forest health and vigor	• *Desired Outcome(s):* improve forest resiliency by reducing stand density and creating a variety of vegetative conditions at multiple scales
Enhance unique plant communities	• *Desired Outcome(s):* decrease trees within and adjacent to shrub-steppes and wet meadows; improve aspen stand health; improve condition of wet meadows; reduce invasive plant occurrences and enhance native plants; increase plant diversity benefiting pollinators
Improve wildlife habitat	• *Desired Outcome(s):* increase wildlife habitat variability by providing diverse vegetative conditions at multiple scales; improve distribution of elk and increasing quality and quantity of forage; and improve open, dry forest conditions for species like white-headed woodpecker
Protect values at risk, public and firefighter safety	• *Desired Outcome(s):* protect values at risk (i.e. private property, campgrounds, etc.); create fire-resilient landscapes, and enable efficient, appropriate response to fire; improve safety of public and firefighters when wildfire does occur and create more effective fuel breaks; improve travel and emergency egress along identified routes
Enhance and monitor culturally significant resources	• *Desired Outcome(s):* reduce non-native invasive plant occurrences in areas with shallow soils; maintain or increase abundance of culturally significant plants and animals; and improve hunting, fishing, and gathering opportunities
Improve and maintain recreational values	• *Desired Outcome(s):* reduce trees and open up views along scenic byway; increase sight distances along road edges; improve campground views and safety while reducing fuels; improve wildlife-related recreational opportunities (i.e. wildlife viewing and hunting opportunity)
Provide forest products to support local communities	• Desired Outcome(s): increase production of timber and other forest products to support local economic growth.

Proposed Action Alternatives

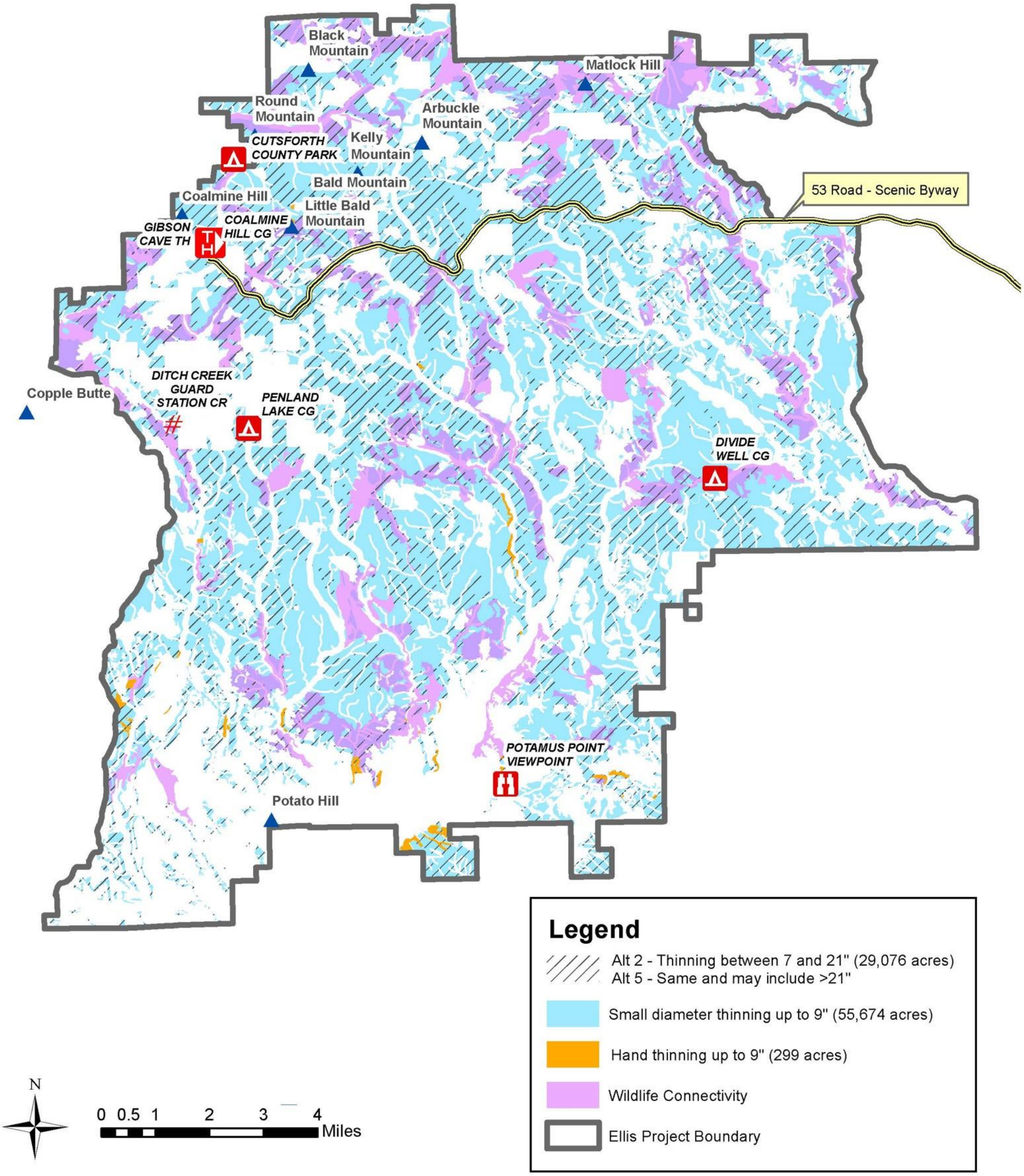
What actions are proposed?

The treatments were designed to meet the purpose and need of the project. There are 5 alternatives; the "no action" alternative and 4 action alternatives which all meet the purpose and need to varying degrees.

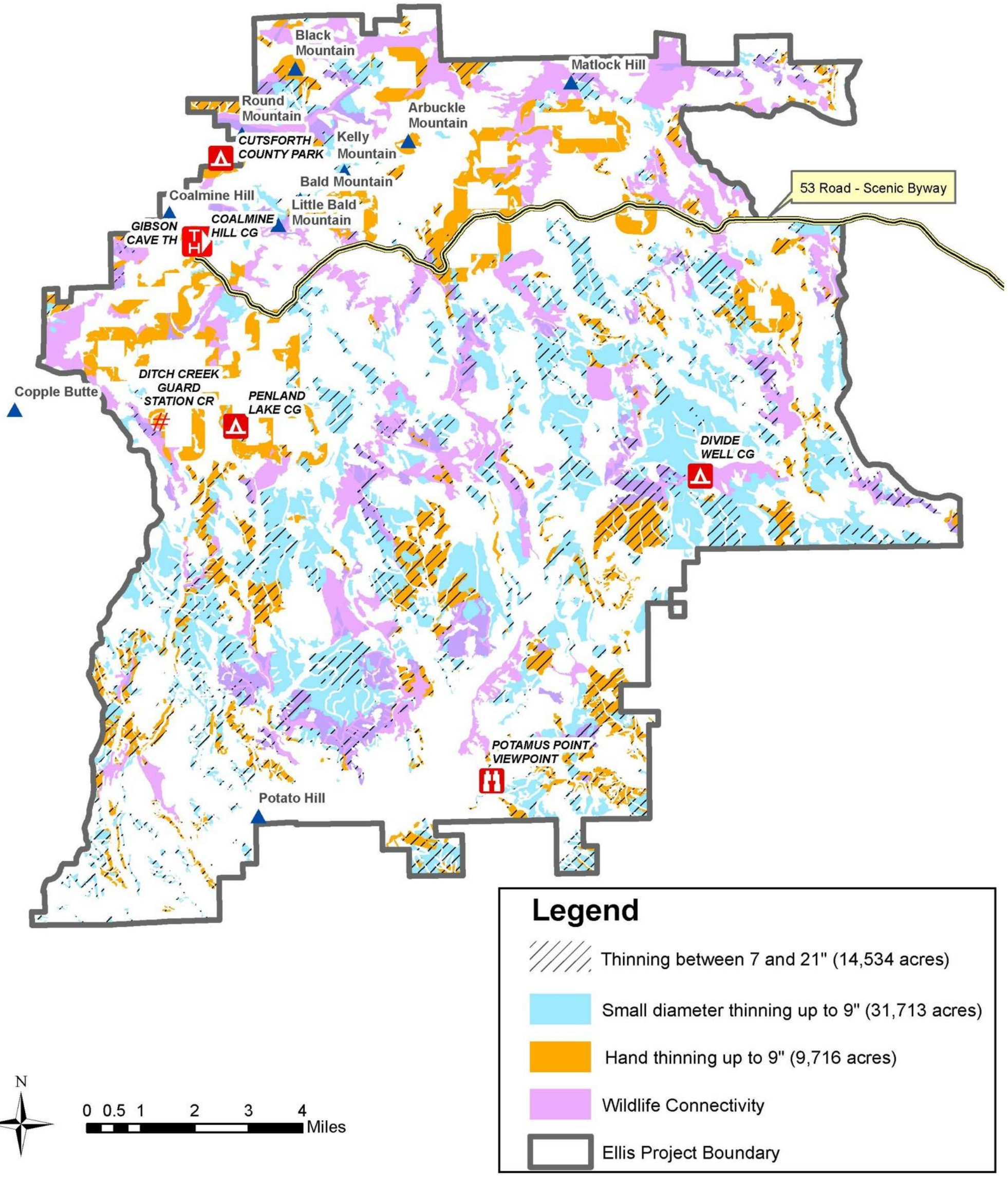
The following treatments are being considered to move the landscape towards desired conditions:

- 7-21" tree thinning
- >21" tree thinning in Alternative 5 only
- small diameter thinning
- mechanical fuels treatments
- pile and jackpot pot burning
- landscape burning
- pruning
- planting of native vegetation
- placement of large wood in meadow streams
- road closures – seasonal and yearlong

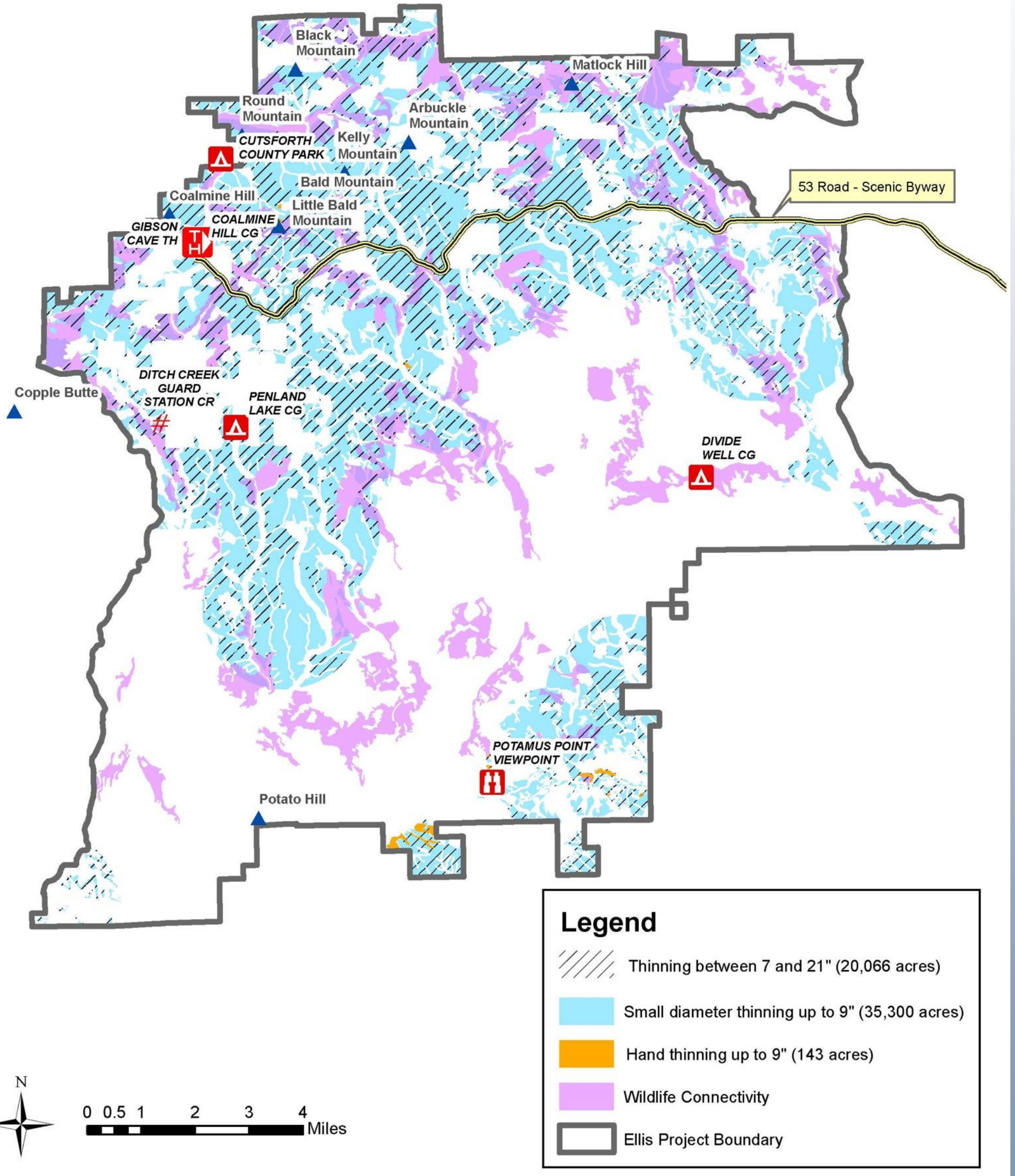
Ellis Project DEIS Vegetation Management
Alternatives 2 and 5



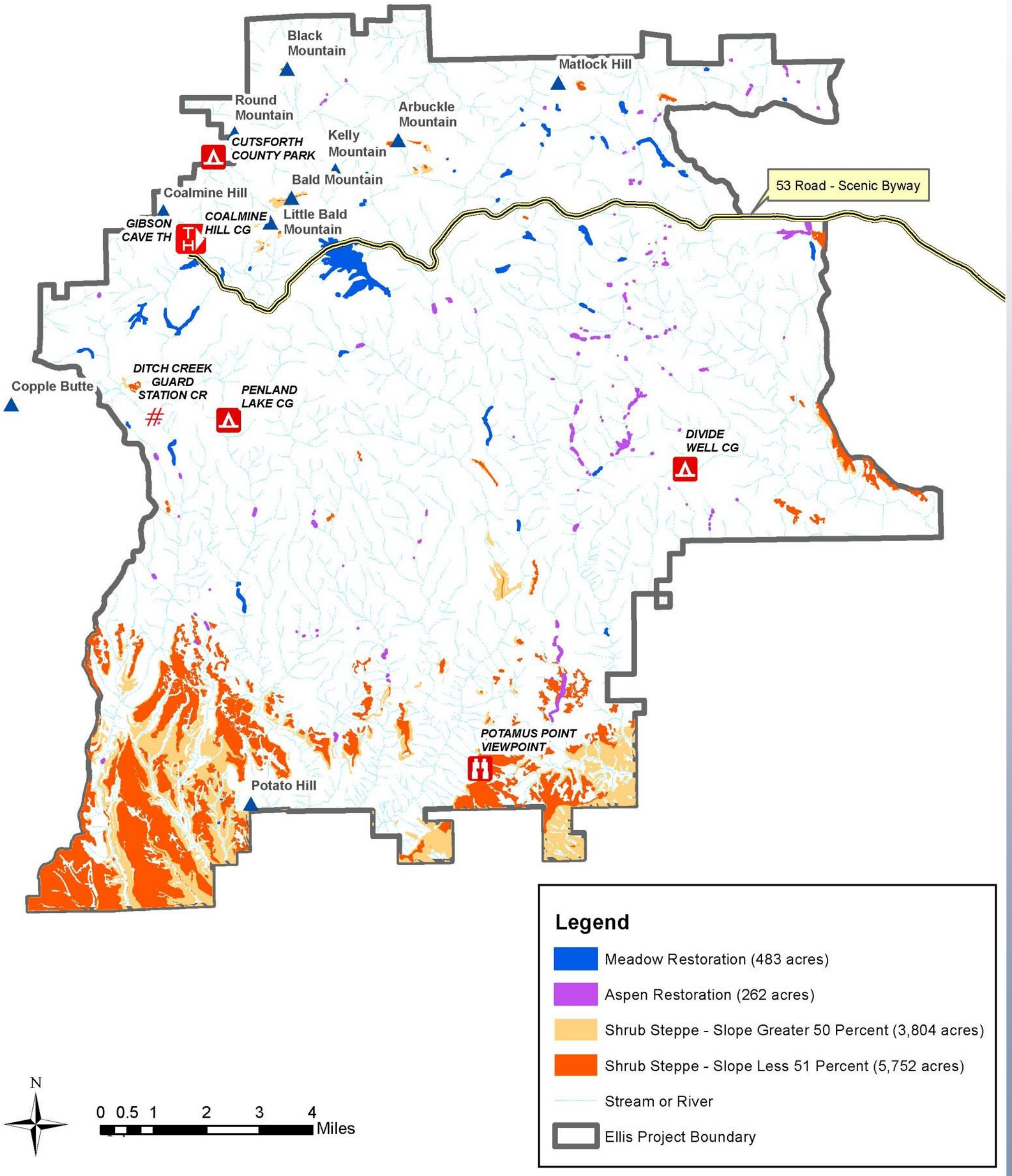
Ellis Project DEIS Vegetation Management
Alternative 3



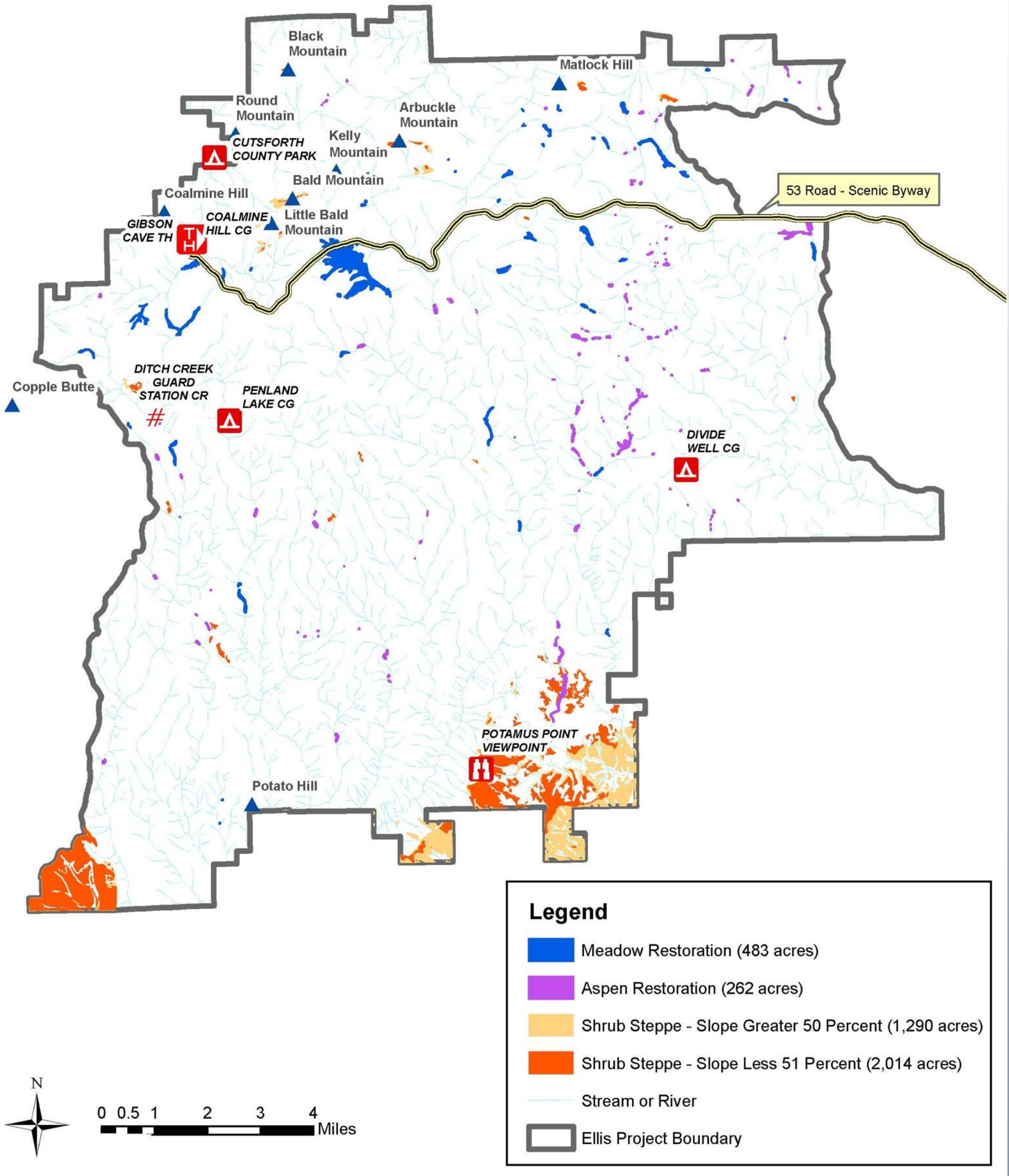
Ellis Project DEIS Vegetation Management
Alternative 4



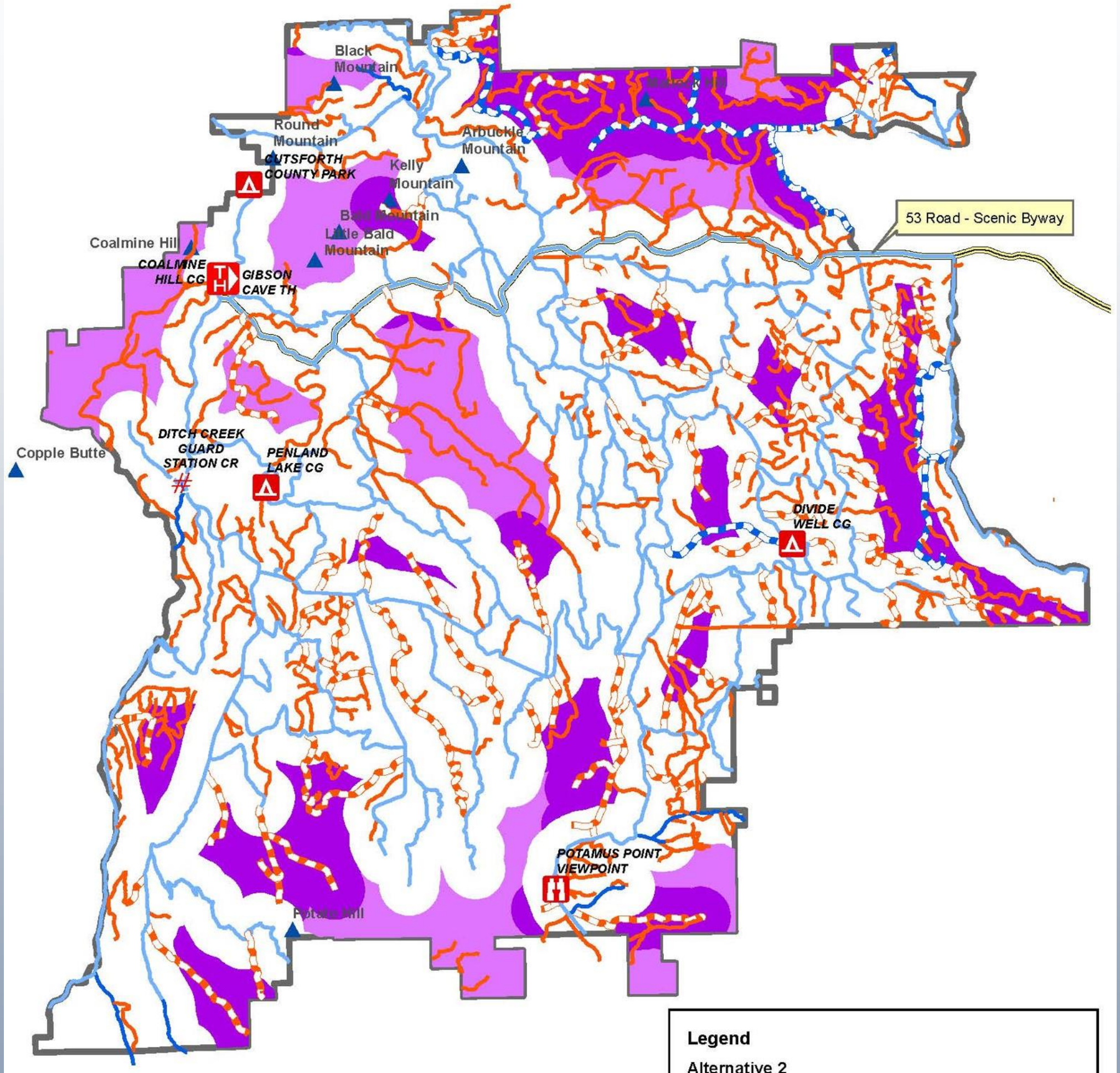
Ellis Project DEIS Unique Habitat Restoration
Alternatives 2, 3, and 5



Ellis Project DEIS Unique Habitat Restoration Alternatives 4



Ellis Project DEIS Enhanced Big Game Habitat
Alternative 2



Note: Enhanced big game habitat is achieved by improving elk security (managing motorized use) and enhancing forage quality (through vegetation treatments). Seasonal hunting closures are during hunting season.

N

0 0.5 1 2 3 4 Miles

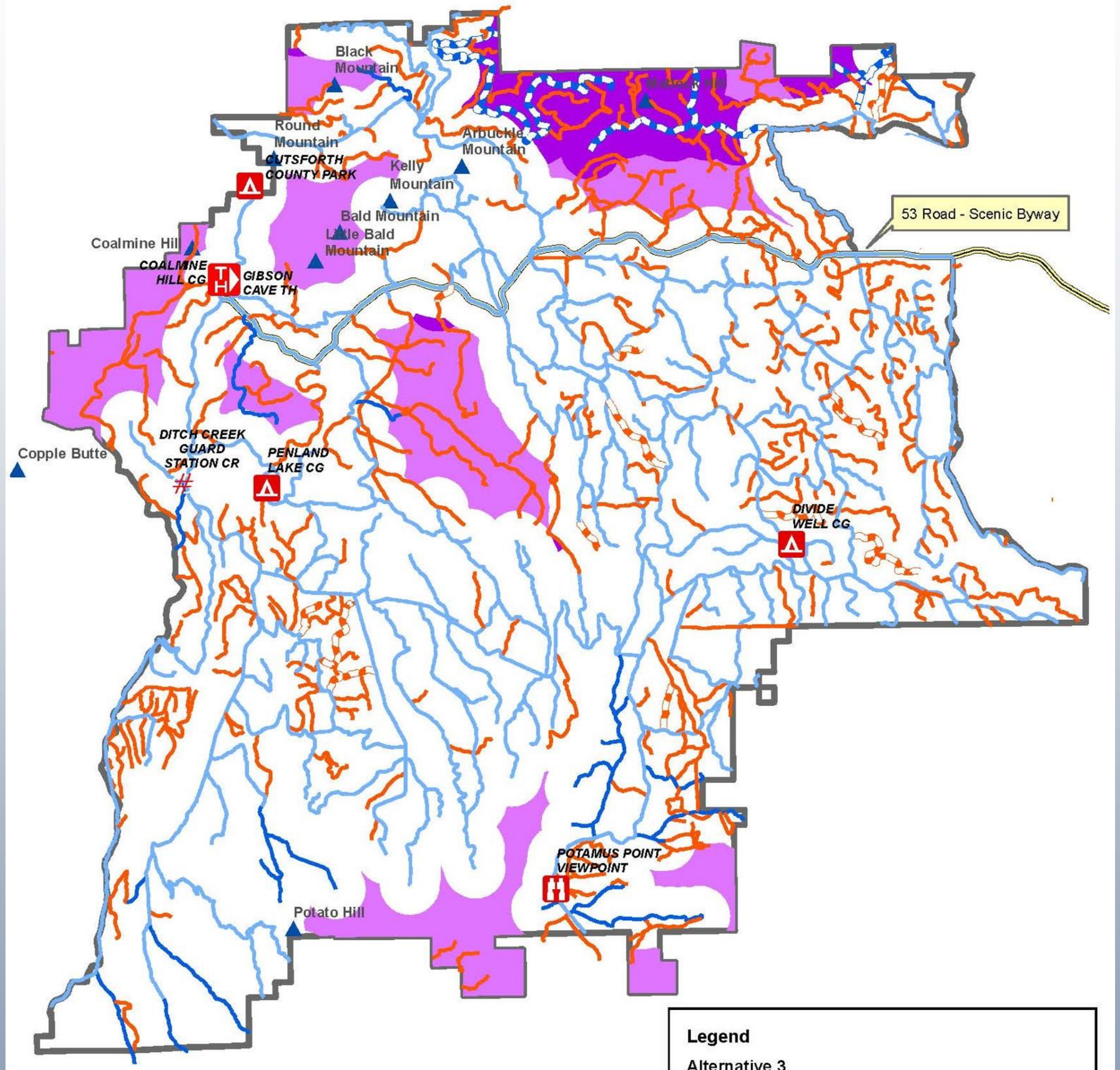
Legend

Alternative 2

Proposed Road Network

- Maintain For Current Needs - Open Year Round (214 miles)
- Keep Seasonally Open (10 miles)
- Retain For Future Use - Closed (241 miles)
- Seasonal - Proposed Hunting Closure (8/15-11/30, 19 miles)
- Retain For Future Use - Proposed Closure (95 miles)
- Existing Elk Security (13,376 acres (11%))
- Improved Elk Security (Total 30,936 acres (27%))
- Ellis Project Boundary

Ellis Project DEIS Enhanced Big Game Habitat
Alternative 3



Note: Enhanced big game habitat is achieved by improving elk security (managing motorized use) and enhancing forage quality (through vegetation treatments). Seasonal hunting closures are during hunting season.

N

0 0.5 1 2 3 4 Miles

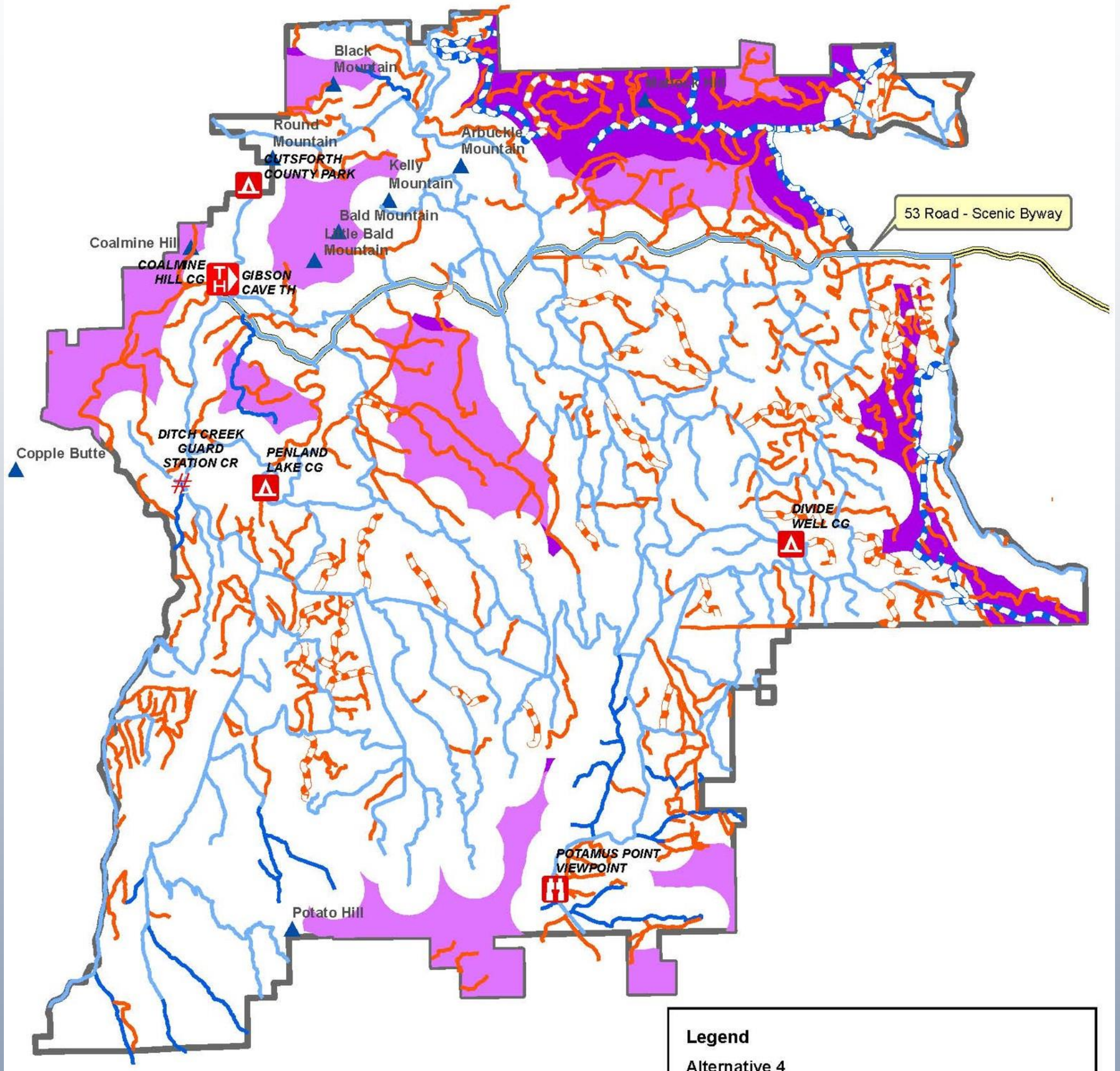
Legend

Alternative 3

Proposed Road Network

- Maintain For Current Needs - Open Year Round (280 miles)
- Keep Seasonally Open (30 miles)
- Retain For Future Use - Closed (241 miles)
- Seasonal - Proposed Hunting Closure (8/15-11/30, 14 miles)
- Retain For Future Use - Proposed Closure (14 miles)
- Existing Elk Security (13,376 acres (11%))
- Improved Elk Security (Total 17,680 acres (15%))
- Ellis Project Boundary

Ellis Project DEIS Enhanced Big Game Habitat
Alternative 4



Note: Enhanced big game habitat is achieved by improving elk security (managing motorized use) and enhancing forage quality (through vegetation treatments). Seasonal hunting closures are during hunting season.

N

0 0.5 1 2 3 4 Miles

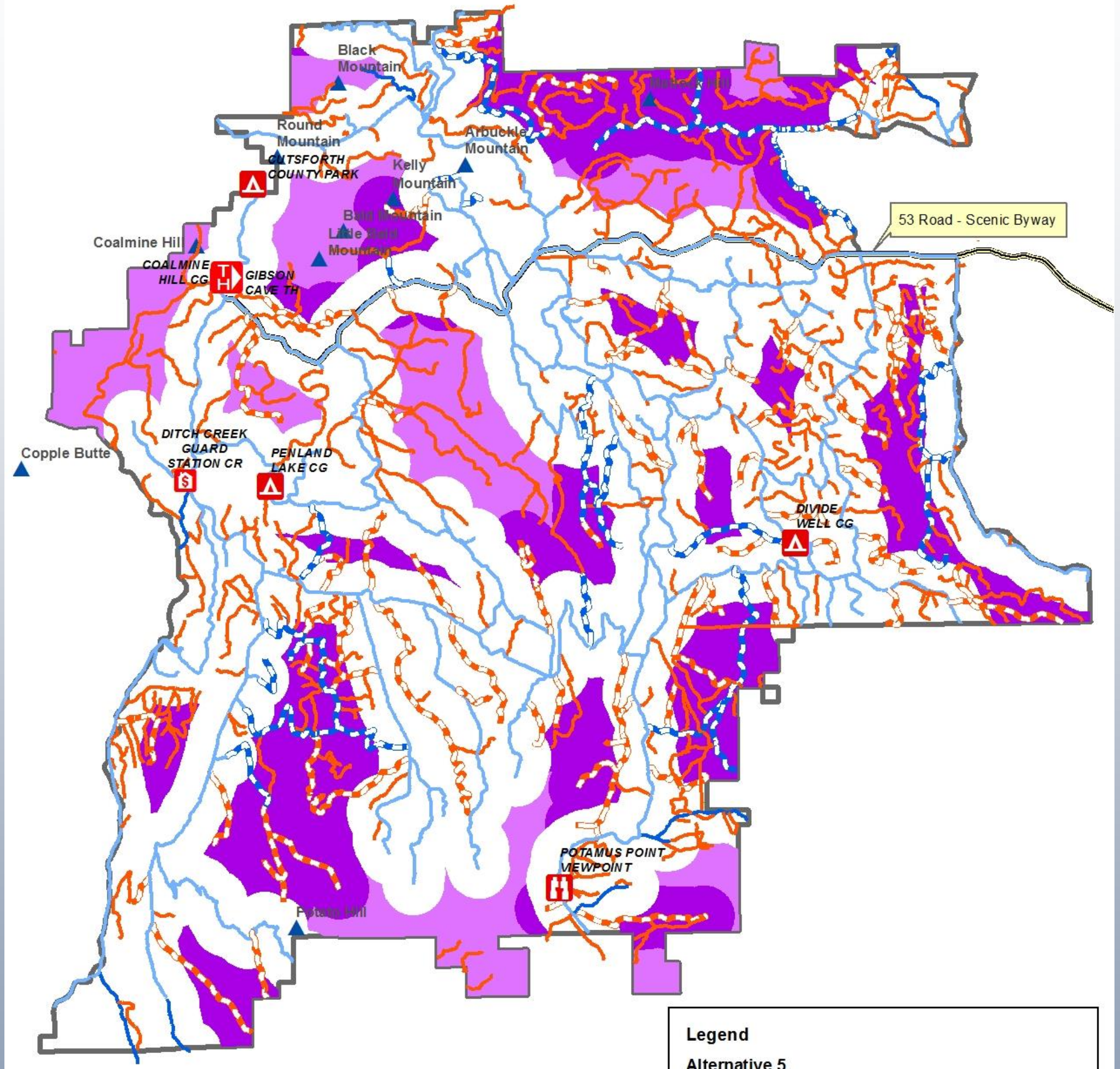
Legend

Alternative 4

Proposed Road Network

- Maintain For Current Needs - Open Year Round (247 miles)
- Keep Seasonally Open (29 miles)
- Retain For Future Use - Closed (241 miles)
- Seasonal - Proposed Hunting Closure (8/15-11/30, 23 miles)
- Retain For Future Use - Proposed Closure (39 miles)
- Existing Elk Security (13,376 acres (11%))
- Improved Elk Security (Total 21,024 acres (18%))
- Ellis Project Boundary

Ellis Project DEIS Enhanced Big Game Habitat
Alternative 5



Note: Enhanced big game habitat is achieved by improving elk security (managing motorized use) and enhancing forage quality (through vegetation treatments). Seasonal hunting closures are during hunting season.

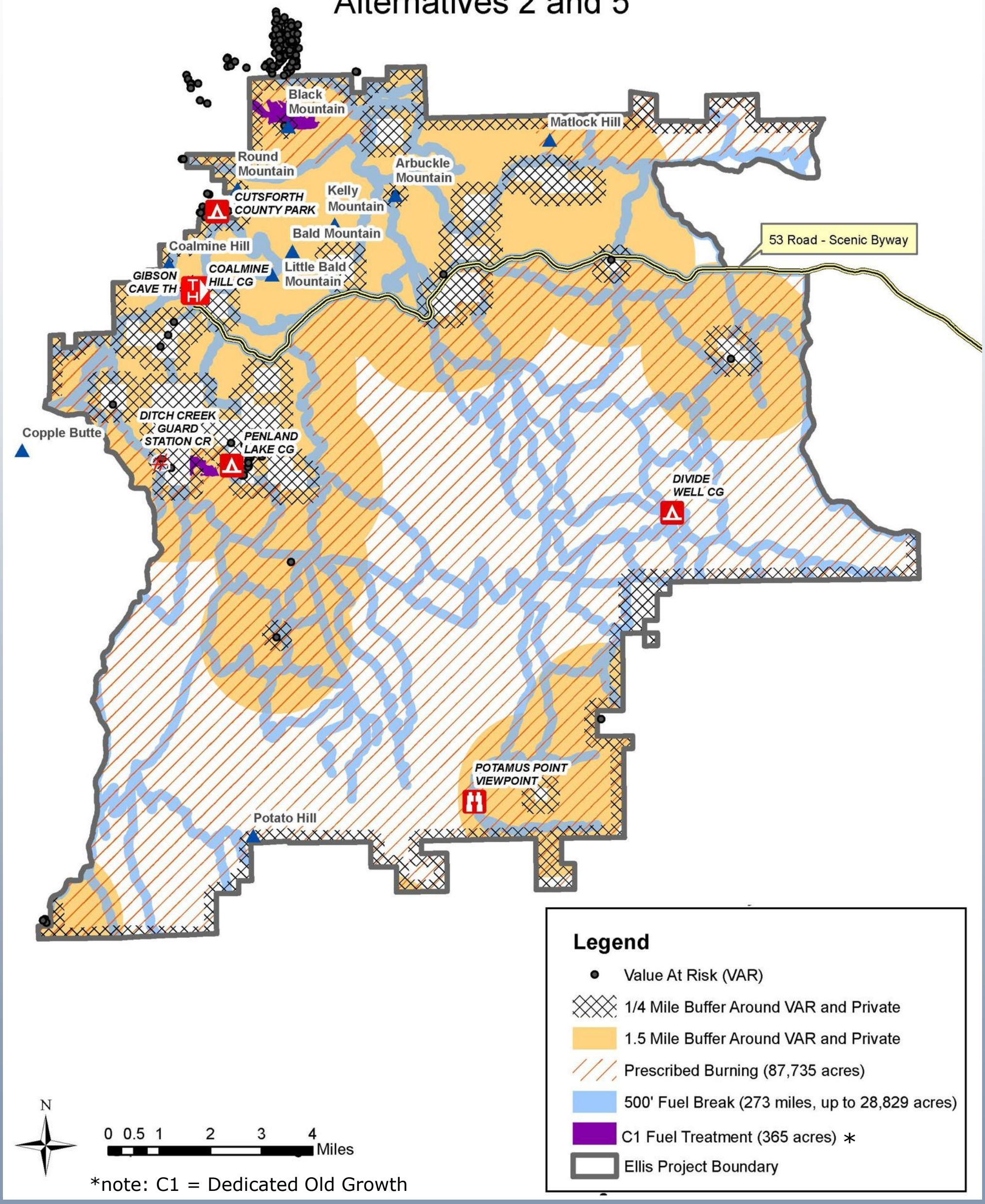
Legend

Alternative 5

Proposed Road Network

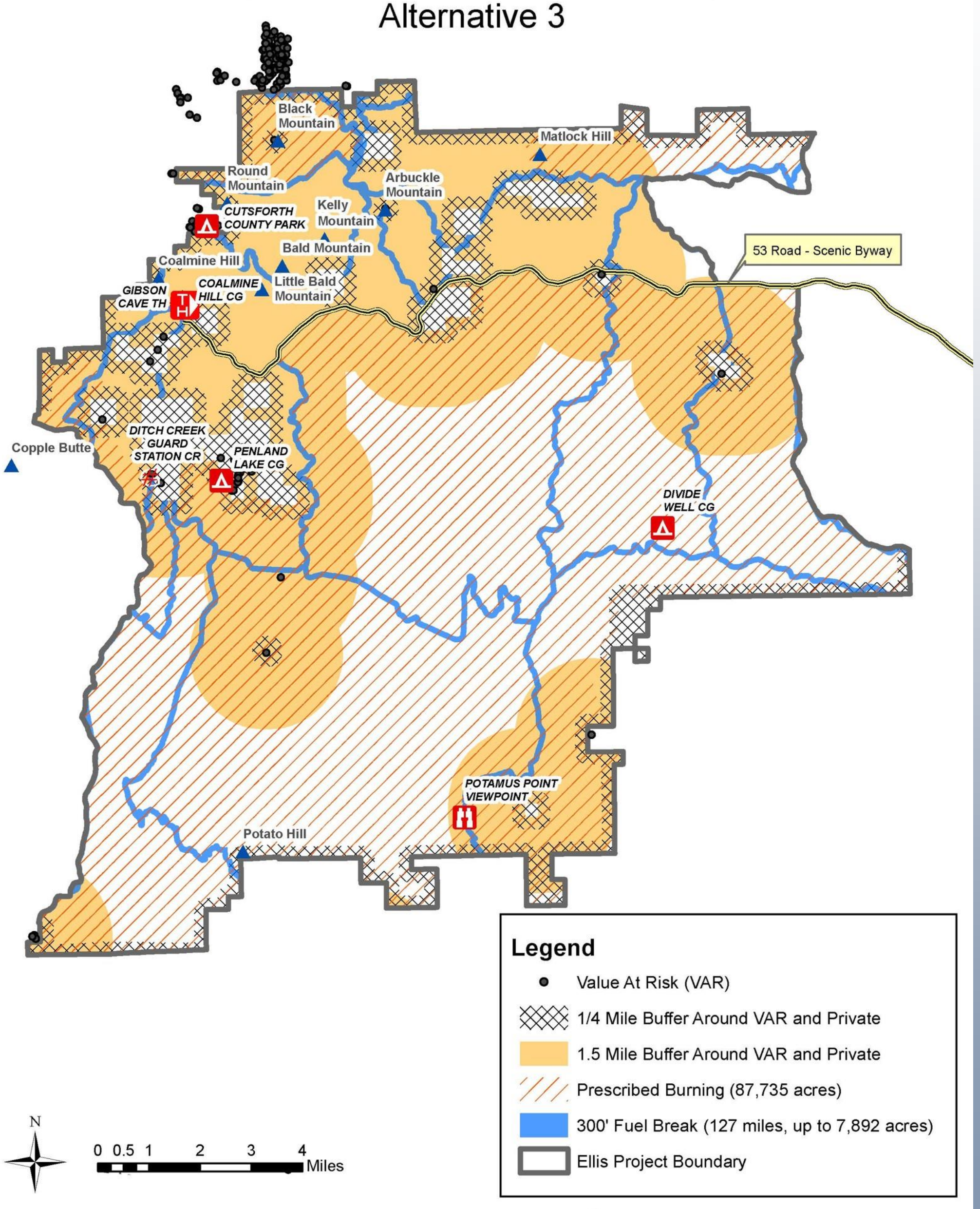
- Maintain For Current Needs - Open Year Round (185 miles)
- Keep Seasonally Open (8 miles)
- Retain For Future Use - Closed (241 miles)
- Seasonal - Proposed Hunting Closure (8/15-11/30, 49 miles)
- Retain For Future Use - Proposed Closure (97 miles)
- Existing Elk Security (13,376 acres (11%))
- Improved Elk Security (Total 37,173 acres (32%))
- Ellis Project Boundary

Ellis Project DEIS Fire and Fuels Management Alternatives 2 and 5

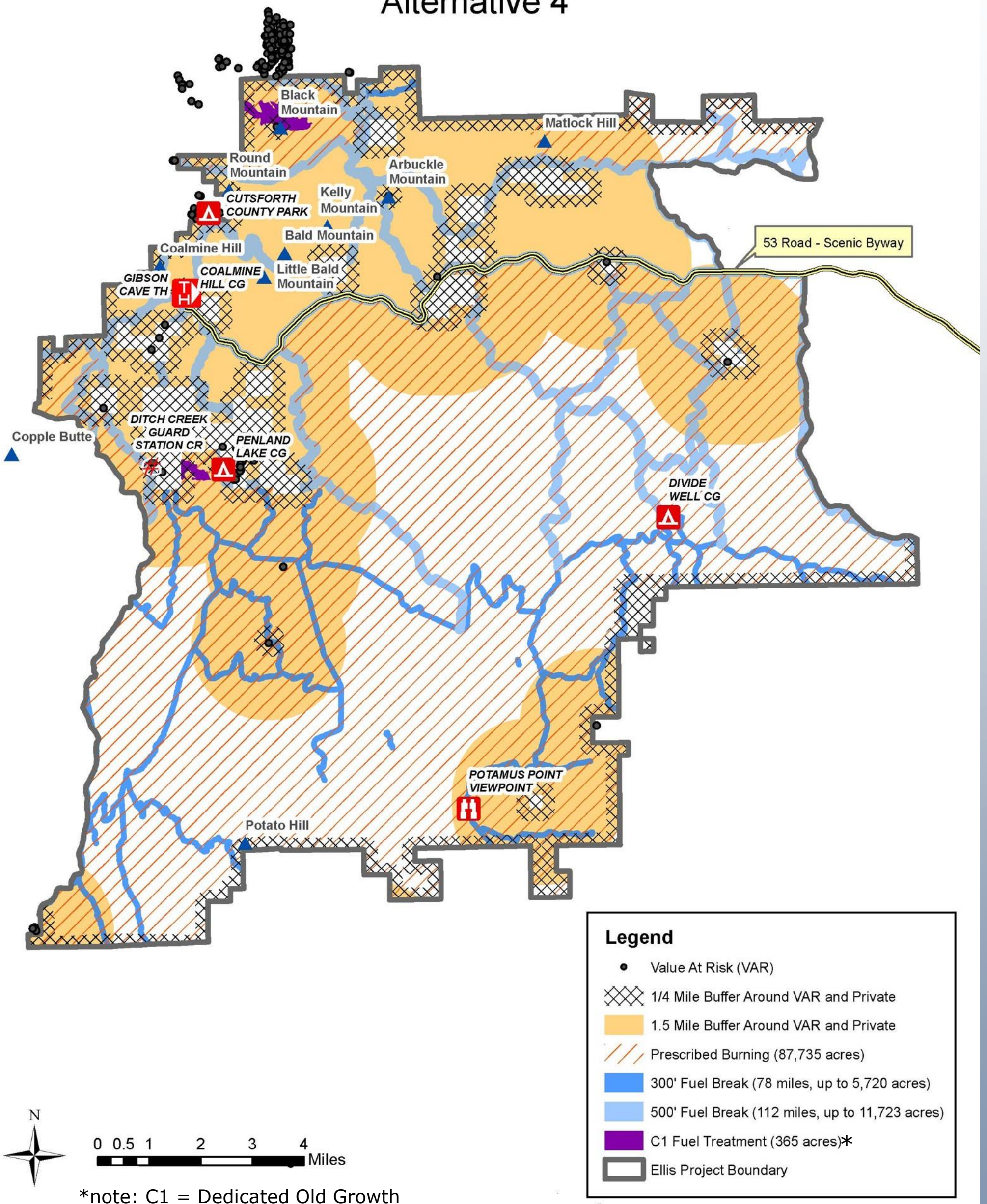


*note: C1 = Dedicated Old Growth

Ellis Project DEIS Fire and Fuels Management
Alternative 3



Ellis Project DEIS Fire and Fuels Management
Alternative 4



*note: C1 = Dedicated Old Growth

Comparison of Alternatives

Ellis Project Action Alternative	Theme	Mech thin in Old Forest	Mech thin in Moist & Cold	Cut >21"	Fuel breaks (feathering)	Road Management	Elk Security
Alternative 2 (Maximum)	Emphasis on forest health and resilience, improving elk distribution, protecting values at risk and fire fighter safety, and providing forest products to support local communities	Yes	Yes	No	Up to 500'; maximizes safety and wildfire management	72% of open road network retained	27% of area >1/2 mile from open road (16%↑in elk security)
Alternative 3 (Minimum)	Emphasis on dry forest treatments and preserving old forest structure	No, except in LIZ	No, except in LIZ	No	Up to 300'; small diameter only; limited to priority roads	96% of open road network retained	15% of area >1/2 mile from open road (4%↑ in elk security)
Alternative 4 (Middle)	Emphasis on fuels and wildlife (focus treatment in ERZ and elk security)	Yes, only in ERZ (move OFMS to OFSS)	Yes, only in ERZ	No	Up to 500' in ERZ; 300' outside ERZ; focus on VAR	88% of open road network retained	18% of area >1/2 mile from open road (7%↑ in elk security)
Alternative 5 (Maximum+ >21)	Emphasis same as Alt 2 with additional focus on forest health and resilience, elk distribution, and providing forest products to support local communities	Yes	Yes	Yes, consistent with amend-ment	Up to 500'; maximizes safety and wildfire management	71% of open road network retained	32% of area >1/2 mile from open road (21%↑in elk security)

LIZ – Lower Intensity Zone (fire intensity within ¼ mile of VAR)

ERZ – Ember Reduction Zone (reduce embers from fire within 1.5 miles of VAR)

OFMS – Old Forest Multi-Strata

OFSS – Old Forest Single Strata

VAR – Value at Risk from fire (e.g. cabins, private land, campgrounds, etc)

Elk Security – >1/2 mile from open motorized route and at least 250 acres in size

Open road network includes yearlong and seasonal roads

For more information:

Please visit the Ellis Project website at:
https://www.fs.usda.gov/project/?project=41350

Or contact:

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North Fork John Day and Heppner Ranger Districts

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